MVA Microsoft Virtual Academy

01 | Introduction to the SharePoint Developer Landscape

Microsoft

Chris Johnson | SharePoint Guru
Christopher Harrison | Microsoft Certified Trainer

Meet Christopher Harrison | @geekt

- Head Geek, GeekTrainer
  - Specializes in ASP.NET, SharePoint and SQL Se
  - Microsoft Certified Trainer
- Over 14 years experience
  - Regular presenter at TechEd
  - Periodic blogger
  - Certification advocate
  - Marathoner, husband, father of one four legged child

Meet Chris Johnson | @LoungeFlyZ

- General Manager, Provoke Solutions Inc.
  - Specializes in SharePoint and the Microsoft technology stack
  - Enjoys all things technical
- Extensive SharePoint Experience
  - Presenter at TechEd, the SharePoint Conference, PDC, SharePoint Best Practices Conference, SharePoint Evolutions
  - Co-author of “Beginning SharePoint 2013 Development”
  - Blogs at www.looslytyped.net
  - Occasionally throws himself out of perfectly good airplanes

Course Topics

MVC4 Jump Start	
01 | Introduction to the SharePoint Developer Landscape	05 | Cloud Hosted Apps
02 | Lists and Sites	06 | Deploying Apps
03 | Client Side SharePoint Development	07 | Workflows
04 | Apps and SharePoint	

MVA jumpstart

Setting Expectations

- Target Audience
  - Developing solutions for SharePoint products and technologies in a team-based, medium-sized to large development environment
  - Considering taking the 70-488 Exam
- Additional Material
  - Microsoft Official Course 20488
    - Developing Microsoft SharePoint® Core Solutions

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Module Overview

SharePoint Developer Landscape

Choosing Approaches to SharePoint Development

- SharePoint 2013 Deployment and Execution Models

Lesson 1: SharePoint Developer Landscape

SharePoint Server 2013 Workloads

Developer Tools for SharePoint Server 2013

What's New for Developers in SharePoint 2013

The SharePoint 2013 Technology Stack

- Entry Points for Developers in SharePoint 2013

SharePoint Server 2013 Workloads

- Portals and Collaboration
- Search
- Enterprise Content Management
- Web Content Management
- Social and Communities
- Business Connectivity Services
- Business Intelligence

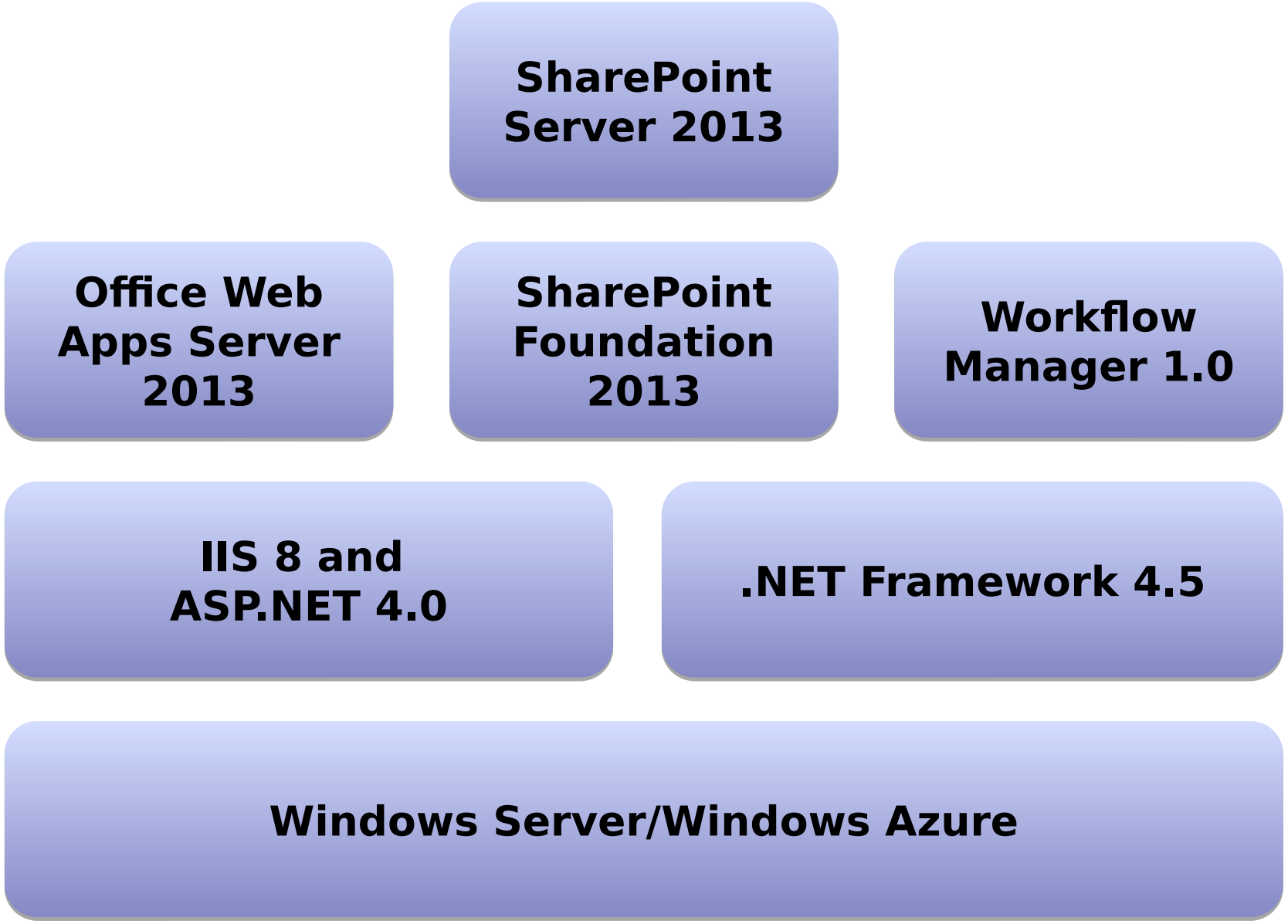
Developer Tools for SharePoint Server 2013

- Microsoft Visual Studio 2012
- Microsoft Office Tools for Visual Studio 2012
- Microsoft SharePoint Designer 2013
- Web design tools

What's New for Developers in SharePoint 2013

- The SharePoint App Model
- Enhanced Client-Side Programming Models
  - JavaScript
  - .NET Framework client
  - REST/OData endpoints
- New Workflow Model

The SharePoint 2013 Technology Stack



Entry Points for Developers in SharePoint 2013

- Server-side object model
  - Managed code
  - Windows PowerShell
- Client.svc
  - Client-side object models
  - REST/OData clients
- Declarative customizations

Lesson 2: Approaches to SharePoint Development

Declarative Components

Client-Side Code

Web Parts

Application Pages

Timer Jobs

Event Receivers

- Workflow

Declarative Components

- Use declarative components to deploy:
  - Site columns
  - Content types and content type bindings
  - List templates and list instances
  - Event registrations and custom actions
  - Workflows, files, and more
- When should you use declarative components?
  - Whenever you can
- Where can you use declarative components?
  - SharePoint Online
  - On-premises deployments

Client-Side Code

- Use client-side code to:
  - Interact with core SharePoint artifacts and functionality
  - Interact with SharePoint Server workloads
  - Perform almost any operations within the scope of a site collection
- When should you use client-side code?
  - Preferred approach when you need to programmatically interact with a SharePoint site collection
- Where can you use client-side code?
  - SharePoint Online
  - On-premises deployments

Web Parts

- Use web parts to:
  - Create custom functionality with user interaction
  - Connect to other web parts
- When should you create web parts?
  - Consider apps first
  - Use web parts when you specifically want to leverage the web part framework
- Where can you use web parts?
  - SharePoint Online (sandboxed solutions only)
  - On-premises deployments (farm and sandboxed solutions)

Application Pages

- Use custom application pages to:
  - Expose functionality to every site in a SharePoint farm
- When should you create a custom application page?
  - When there are no other options
  - Consider apps first
- Where can you use custom application pages?
  - On-premises deployments
    - Subject to policy and administrative approval
  - *Not available* for SharePoint Online

Timer Jobs

- Use custom timer jobs to:
  - Run background tasks on a scheduled basis
  - Process queues of work items on a scheduled basis
- When should you create a custom timer job?
  - When you do not require user interaction
  - When you want to remove logic from the page load process
- Where can you use custom timer jobs?
  - On-premises deployments
    - Subject to policy and administrative approval
  - *Not available* for SharePoint Online

Event Receivers

- Use event receivers to:
  - Run background tasks on a scheduled basis
  - Process queues of work items on a scheduled basis
- When should you create an event receiver?
  - When you do not require user interaction
  - When you want to remove logic from the page load process
- Where can you use event receivers?
  - On-premises deployments
  - SharePoint Online

Workflow

- Use workflows to:
  - Automate business processes
  - Manage the flow of documents and information
- When should you create a workflow?
  - When you need to capture input from multiple users
  - When you need to create logic that reacts to changes in documents or sites
- Where can you use event receivers?
  - On-premises deployments
  - SharePoint Online

Lesson 3: Understanding SharePoint 2013 Deployment and Execution Models

SharePoint Features

Farm Solutions

Sandboxed Solutions

- Apps for SharePoint

SharePoint Features

- Anatomy of a Feature
  - Feature folder
  - Feature manifest file
  - Element manifests
  - Element files
- Feature deployment
  - Deployment to WFE server file system
  - Deployment as part of SharePoint app or solution

Farm Solutions

- Anatomy of a farm solution
  - Solution manifest
  - Assemblies
  - Files
  - Features
- Capabilities are unlimited
  - Deploy any server-side components
- Deployment options may be limited
  - Prohibited in SharePoint Online
  - May be prohibited in on-premises deployments

Sandboxed Solutions

- Structured in the same way as a farm solution
- Deployed to a Solutions Gallery
- Scoped to a site collection
- Functionality is constrained:
  - Isolated worker process
  - No access to server-side file system
  - Limited access to SharePoint object model
- Resource consumption governed by quota system
- Apps for SharePoint are now the preferred approach

Apps for SharePoint

- Distribution
  - Publish to App Catalog
  - Publish to Office Marketplace
- Encapsulation
  - No server-side code
  - All SharePoint artifacts hosted within app web
- Development models
  - SharePoint-hosted
  - Remote-hosted
- Interaction
  - Full page
  - App part
  - Command extensions

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DEMO

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